CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 79-32

NPDES NO. CA0037451

WASTE DISCHARGE REQUIREMENTS FOR:

U.S. DEPARTMENT OF COMMERCE, NOAA
NATIONAL MARINE FISHERIES SERVICE
SOUTHWEST FISHERIES CENTER, TIBURON LABORATORY
TIBURON, CA, MARIN COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. The National Marine Fisheries Service, Tiburon Laboratory (hereinafter called the discharger submitted a report of waste discharge dated July 28, 1978.

2. The discharger has two waste discharges. Waste 001 is domestic sewage only which receives primary treatment plus disinfection. Waste 002 is laboratory wastes which receives a high level of treatment. The two wastes are discharged through separate outfalls several hundred feet apart into San Francisco Bay, a water of the United States, at a latitude of 37° 53' 23" N, longitude 122° 26' 40" W.

3. Waste 001 is treated by an Imhoff tank and ultraviolet radiation prior to discharge at a point about 50 feet offshore and 4 feet below mean lower low water. Waste 002 is the result of the discharger's laboratory testing of the effects on marine fish of changes in temperature, salinity, turbidity, as well as the effects of various pollutants. Bay water is pumped from the bay continuously. A portion of this bay water is used to fill the reservoir that serves the laboratory. The remainder is discharged through the outfall. When pollutants are added to the test water, the test water is filtered through an activated carbon column prior to mingling with the excess pumped bay water. The combined flow (waste 002) discharges through a 12" pipe attached to the dock 3 feet above the water surface. Depth of water is 15 feet. No documentation has been developed for either outfall which indicates that 10:1 initial dilution has been provided.

4. The discharger reports that the population from Tiburon Laboratory served by the sewerage system is:

   - five people living in two residences on site; and
   - forty-five people working eight hour shifts on site.

   No increase in employment is expected in the near future.

5. Sewage from an undetermined number of people at San Francisco State University's "Tiburon Center For Environmental Studies" is also discharged to the sewerage system. The Tiburon Center is being developed in existing buildings on 35 acres of land which is adjacent to Tiburon Laboratory and was recently declared surplus and deeded to the University. An academic program is proposed which will result in 35 to 100 people using the Tiburon Center, including ten people who will be in residence on the site, when the Center is in full operation. San Francisco University has been requested to report on the sewerage facilities that will be provided to assure compliance with the Water Quality Control Plan.

6. A Water Quality Control Plan for the San Francisco Bay Basin was adopted by the Board in April 1975. The Basin Plan contains water quality objectives for San Francisco Bay.

7. The beneficial uses of San Francisco Bay are:

   a. Navigation
   b. Water Contact Recreation
   c. Non-Contact Water Recreation
   d. Commercial and Sport Fishing
   e. Wildlife Habitat
   f. Marine Habitat
   g. Fish Migration
   h. Fish Spawning

8. On January 31, 1975, the Environmental Protection Agency (EPA) issued an NPDES permit, CA0037451 for waste 001. That permit expired June 30, 1977. On November 30, 1973, EPA issued an NPDES permit, CA0006947, for waste 002. That permit expired November 1, 1978. Those two permits are being combined in this permit, CA0037451.

9. As this project is an NPDES permit, this Board, pursuant to Water Code Section 13389, is not required to comply with the provisions of Chapter 3 of Division 13 of the Public Resources Code (California Environmental Quality Act).

10. The discharger and interested agencies and persons have been notified of the Board's intent to revise requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.

11. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder and to the provision of the Federal Water Pollution Control Act, as amended, and regulations and guidelines adopted thereunder, that the discharger shall comply with the following:

A. Prohibitions

1. The discharge of waste 001 and 002 at any point at which the wastewater does not receive an initial dilution of at least 10:1 is prohibited.

2. There shall be no bypass or overflow of untreated wastewater to waters of the State, either at the plant or from the collection system.

3. The population which presently contributes to waste 001 shall not be increased until the discharger complies with all prohibitions, effluent and receiving water limitations, and provisions of this order.

B. Effluent Limitations - Waste 001

1. The discharge of waste 001 containing constituents in excess of the following limits is prohibited:

Constituents	Units	30-day Average	7-day Average	Daily Maximum	Instantaneous Maximum
a. BOD	mg/l	30	45	60	-
b. Suspended Solids	mg/l	30	45	60	-
c. Oil and grease	mg/l	10	-	20	-
d. Chlorine Residual	mg/l	-	-	-	0.0
e. Settleable Matter	ml/l/hr	0.1	-	-	0.2

2. The arithmetic mean of the biochemical oxygen demand (5 day, 20°C) and suspended solids values, by weight, for waste 001 samples collected in a period of 30 consecutive calendar days shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected at approximately the same times during the same period (85% removal).

3. The pH of waste 001 shall not exceed 9.0 nor be less than 6.0.

4. Waste 001 as discharged shall meet the following limits of quality:

> The total coliform bacteria for a median of five consecutive effluent samples shall not exceed 240 per 100 milliliters. Any single sample shall not exceed a most probable number (MPN) of 10,000 total coliform bacteria per 100 milliliters when verified by a repeat sample taken within 48 hours.

5. In any representative set of samples waste 001 as discharged shall meet the following limit of quality:

> The survival of an acceptable test organism in 96-hour bioassays of the effluent shall achieve a 90 percentile value of not less than 50 percent survival.

6. Representative samples of effluent shall not exceed the following limits more than the percentage of time indicated:(1)

Constituent	Unit of Measurement	50% of time	10% of time
Arsenic	mg/l	0.01	0.02
Cadmium	mg/l	0.02	0.03
Total Chromium	mg/l	0.005	0.01
Copper	mg/l	0.2	0.3
Lead	mg/l	0.1	0.2
Mercury	mg/l	0.001	0.002
Nickel	mg/l	0.1	0.2
Silver	mg/l	0.02	0.04
Zinc	mg/l	0.3	0.5
Cyanide	mg/l	0.1	0.2
Phenolic Compounds	mg/l	0.5	1.0
Total Identifiable Chlorinated Hydrocarbons(2)	mg/l	0.002	0.004

(1) These limits are intended to be achieved through secondary treatment, source control and application of pretreatment standards.

(2) Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

C. Effluent Limitations - Waste 002

1. Waste 002 as discharged shall not exceed the following limits:

Constituent	Units	30-day Average	Daily Maximum	Instantaneous Maximum
a. BOD	mg/l	5	10	-
	kg/day	1.7	3.4	-
	lbs/day	3.8	7.6	-
b. Total Suspended Solids (net)	mg/l	5	10	-
	kg/day	1.7	3.4	-
	lbs/day	3.8	7.6	-

Constituent	Units	30-day Average	Daily Maximum	Instantaneous Maximum
c. Oil and Grease (net)	mg/l	10	20	-
	kg/day	3.4	6.8	-
	lbs/day	7.6	15.2	-
d. Settleable Matter	ml/l/hr	0.1	-	0.2
e. Organophosphorous and Carbamate Compounds	mg/l	-	-	0.1

2. The pH of waste 002 shall not exceed 9.0 nor be less than 6.0.

3. In any representative set of samples waste 002 as discharged shall meet the following limit on toxicity:

   The survival of an acceptable test organism in 96 hour bioassays of the effluent shall achieve a median of 90% survival for three consecutive samples and a 90 percentile value of not less than 70% survival for 10 consecutive samples.

D. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:

   a. Floating, suspended, or deposited macroscopic particulate matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended or deposited oil or other products of petroleum origin;

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:

   a. Dissolved oxygen — 5.0 mg/l minimum. Annual median - 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.

b.	Dissolved sulfide	0.1 mg/l maximum.
c.	pH	Variation from natural ambient pH by more than 0.2 pH units.
d.	Un-ionized Ammonia as N	0.025 mg/l annual median 0.4 mg/l maximum
e.	Nutrients	50 ug/l chlorophyll a maximum. When background levels exceed this requirement, then this discharge shall not add further nutrients.

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

E. Provisions

1. The discharger shall employ a sewage treatment plant supervisor who possesses a grade of certification equivalent to the class of plant operated.

2. The discharge shall comply with all prohibitions, effluent and receiving limitations, and provisions of this order immediately.

3. In the event that pollutants are added to waste 002, other than those limited by this permit, the discharger shall file a report with the Executive Officer describing the pollutant, its effects, the concentrations proposed for use, and proposed treatment method. Testing of those pollutants may commence upon written approval from the Executive Officer.

4. The discharger shall review and update annually its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willfull and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

5. The discharger shall comply with the attached Monitoring and Reporting Program as ordered by the Executive Officer.

6. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements, and Definitions" dated April 1977.

7. This order expires March 1, 1984. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

This order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Federal Water Pollution Control Act or amendments thereto, and shall become effective 30 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Fred H. Dierker, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on March 20, 1979.

FRED H. DIERKER
Executive Officer